



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0307; Directorate Identifier 2012-SW-079-AD;**

**Amendment 39-17410; AD 2013-07-06]**

**RIN 2120-AA64**

**Airworthiness Directives; Eurocopter France Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting an airworthiness directive (AD) for Eurocopter France (Eurocopter) Model AS332C, AS332L, and AS332L1 helicopters and superseding an AD for Model AS332L2 and EC225LP helicopters. This AD requires inspecting the chip detector and modifying the chip collector, both installed on the main gearbox (MGB). This AD is prompted by an investigation which showed a failure within the epicyclic reduction gear module (epicyclic module) resulted in the rupture of the MGB case and separation of the main rotor head of a Model AS332L2 helicopter. These actions are intended to prevent failure of the MGB and subsequent loss of control of the helicopter.

**DATES:** This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF

PUBLICATION IN THE FEDERAL REGISTER].

We must receive comments on this AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.
- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800- 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, Texas 75052, telephone (972) 641-0000 or (800) 232-0323, fax (972) 641-3775, or at <http://www.eurocopter.com/techpub>. You may review the referenced service information at the FAA, Office of the Regional

Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Rao Edupuganti, Aerospace

Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-4389; fax: (817) 222-5961, email [rao.edupaganti@faa.gov](mailto:rao.edupaganti@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

**Discussion**

On December 28, 2011, we issued AD 2012-01-03, Amendment 39-16914 (77 FR 5991, February 7, 2012) for Eurocopter Model AS332L2 and EC225LP helicopters. AD

2012-01-03, Amendment 39-16914 requires determining whether the “CHIP” detector light illuminated because of a metal particle on the chip detector of the epicyclic module, and whether the “CHIP” detector light stayed illuminated after the “CHIP” detector switch was turned to the “CHIP PULSE” setting. If so, or if the maintenance records do not indicate which “CHIP” detector caused the “CHIP” detector light to illuminate or whether the detector light stayed illuminated after the switch was turned, AD 2012-01-03 requires replacing the epicyclic module before further flight. AD 2012-01-03 also requires replacing the epicyclic module if, thereafter, the “CHIP” detector light illuminates, stays illuminated after the switch is turned, and there is a metal particle on the epicyclic module chip detector. Lastly, AD 2012-01-03 requires removing, modifying, re-identifying, and reinstalling the chip collector within 50 hours time-in-service (TIS) and before installing a MGB on any applicable helicopter.

AD 2012-01-03, Amendment 39-16914 (77 FR 5991, February 7, 2012) was prompted by an investigation of an accident that showed a failure within the epicyclic reduction gear module of the MGB resulted in the rupture of the MGB case, which allowed the main rotor head to separate from the helicopter. The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, had issued EASA AD 2009-0099-E, dated April 23, 2009 (2009-0099-E) to correct an unsafe condition for Eurocopter Model AS332L2 and EC225LP helicopters, and notified us of the unsafe condition in its AD. The actions of AD 2012-01-03 are intended to prevent failure of the MGB and subsequent loss of control of the helicopter.

### **Actions Since Existing AD Was Issued**

Since we issued AD 2012-01-03, Amendment 39-16914 (77 FR 5991, February 7, 2012), EASA issued EASA AD No. 2012-0129-E, dated July 13, 2012 (2012-0129-E), which superseded EASA AD 2009-0099-E, to correct an unsafe condition for Eurocopter Model AS332C, AS332C1, AS332L, AS332L1, AS332L2, and EC225LP helicopters. EASA advises that, based on the final accident report following investigation of the accident that prompted its original AD, it is necessary to standardize the inspection intervals for all electrical and non-electrical chip detectors, require the inspection for all models of the “Super-Puma” helicopter family, and expand the inspection to all rotor drive system gear boxes (the intermediate gearbox (IGB) and the tail gear box (TGB), in addition to the MGB. EASA AD 2012-0129-E retains the modification of the MGB epicyclic reduction gear module requirement of EASA AD 2009-0099-E, but expands the applicability and requires a recurring inspection of all electrical and non-electrical chip detectors installed on the MGB, IGB, and TGB.

### **FAA’s Determination**

These helicopters have been approved by the aviation authority of France and are approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

### **Related Service Information**

Eurocopter has issued Emergency ASB No. 05.00.81, Revision 3, dated July 13, 2012 (EASB 05.00.81), for Model AS332L2 helicopters and Emergency ASB No. 05A017, Revision 3, dated July 13, 2012 (EASB 05A017) for Model EC225LP helicopters. Both Emergency ASBs specify procedures for checking the chip detector on the MGB epicyclic module, modifying the main module chip collector, reidentifying the chip collector, and installing the chip detector.

Eurocopter has also issued Alert Service Bulletin (ASB) No. AS332-05.00.94, Revision 0, dated July 13, 2012 (ASB AS332-05.00.94), for Model AS332 C, C1, L, L1, and L2 helicopters and ASB No. EC225-05A29, Revision 0, dated July 13, 2012 (ASB EC225-05A29) for Model EC225 LP helicopters. Both ASBs standardize the time interval between chip detector inspections of the MGB, IGB, and TGB.

EASA classified these ASBs as mandatory and issued EASA AD 2012-0129-E to ensure continued airworthiness of these helicopters.

### **AD Requirements**

This AD retains the inspection and modification requirements of AD 2012-01-03, Amendment 39-16914 (77 FR 5991, February 7, 2012), and adds the following requirements:

- For AS332 helicopters with non-electrical chip detectors and electrical chip detectors without a caution light on the instrument panel, within 25 hours TIS and thereafter at intervals not exceeding 25 hours TIS, inspecting the MGB, IGB, and TGB chip detectors for a chip or magnetic particle.
- For AS332 helicopters with electrical chip detectors with a caution light on the instrument panel, within 50 hours TIS and thereafter at intervals not exceeding 50 hours

TIS, inspecting the MGB, IGB, and TGB chip detectors for a chip or magnetic particle.

- For EC225 helicopters, within 50 hours TIS and thereafter at intervals not exceeding 50 hours TIS, inspecting the MGB, IGB, and TGB chip detectors for a chip or magnetic particle. If there is a chip or magnetic particle, verifying that the “CHIP” caution light illuminates on the “Vehicle” page of the Vehicle Management System.

### **Costs of Compliance**

We estimate that this AD will affect 6 helicopters of U.S. Registry. Based on an average labor rate of \$85 per work hour, we estimate that operators may incur the following costs in order to comply with this AD:

- Inspecting maintenance records to determine if a “CHIP” light illuminated within the past 200 hours TIS will take about 1.0 work-hour, for a total cost per helicopter of \$85;
- Removing, inspecting, and replacing an affected epicyclic module will require about 10 work-hours and required parts would cost approximately \$512,318, for a total cost per helicopter of \$513,168;
- Removing, modifying, and reidentifying the “CHIP” collector will require about 14 work-hours, for a total cost per helicopter of \$1,190; and
- Inspecting the module magnetic chip detector circuit and the MGB, IGB, and TGB chip detectors will require about 2 work-hours, for a total cost per helicopter of \$170 per inspection cycle.

### **FAA’s Justification and Determination of the Effective Date**

The short compliance time involved is required because the previously-described unsafe condition can adversely affect both the structural integrity and controllability of

the helicopter. Therefore, because these helicopters are primarily used for long-range offshore transportation and the inspection of the MGB, IGB, and TGB chip detectors is required within 25 hours TIS, a very short time period based on the average flight-hour utilization rate of these helicopters, this AD must be issued immediately.

Since an unsafe condition exists that requires the immediate adoption of this AD, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in less than 30 days.

#### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

#### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on



the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2012-01-03, Amendment 39-16914 (77 FR 5991, February 7, 2012) and adding the following new

AD:

2013-07-06 **EUROCOPTER FRANCE (EUROCOPTER)**: Amendment 39-17410;

Docket No. FAA-2013-0307; Directorate Identifier 2012-SW-079-AD.

**(a) Applicability.**

This AD applies to Eurocopter Model AS332C, AS332L, AS332L1, AS332L2, and EC225LP helicopters, certificated in any category.

**(b) Unsafe Condition.**

This AD defines the unsafe condition as degradation of the epicyclic reduction gear module within a rotor drive system gearbox. This condition could result in failure of the main gearbox (MGB), intermediate gearbox (IGB), or tail gearbox (TGB) and subsequent loss of control of the helicopter.

**(c) Affected ADs.**

This AD supersedes AD 2012-01-03, Amendment No. 39-16914 (77 FR 5991, February 7, 2012).

**(d) Effective Date.**

This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(e) Compliance.**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(f) Required Actions.**

(1) For Model AS332L2 and EC225LP helicopters, before further flight:

(i) Determine from the maintenance records whether, within the last 200 hours

time-in-service (TIS), the “CHIP” detector light illuminated because of a metal particle on the chip detector of the MGB epicyclic module (module), and if so, whether the “CHIP” detector light stayed illuminated after the “CHIP” detector switch was turned to the “CHIP PULSE” setting to activate the “fuzz burn-off” feature.

(A) If the maintenance records indicate that the “CHIP” detector light illuminated because of a metal particle on the chip detector of the module, and the “CHIP” detector light stayed illuminated after the “CHIP” detector switch was turned to the “CHIP PULSE” setting, replace the module with an airworthy module before further flight.

(B) If the maintenance records do not indicate which “CHIP” detector caused the “CHIP” detector light to illuminate, or whether the detector light stayed illuminated after the “CHIP” detector switch was turned to the “CHIP PULSE” setting, replace the module with an airworthy module before further flight.

(ii) Inspect the module magnetic chip detector electrical circuit and determine whether the system is functioning properly, including whether the “CHIP” detector light annunciates on the instrument panel (Vehicle Monitoring System Screen).

(iii) After accomplishing paragraph (f)(1)(i)-(ii) of this AD, thereafter, if the “CHIP” detector light illuminates, stays illuminated after the chip detector switch is turned to the “CHIP PULSE” setting, and there is a metal particle on the module magnetic chip detector (rather than the main reduction gear (lower MGB), the flared housing (mast assembly), the IGB, or the TGB chip detectors) that caused the “CHIP” detector light to illuminate, replace the module with an airworthy module.

(iv) Within 50 hours TIS, remove, modify, reidentify, and reinstall the chip collector as shown in Figures 2 through 5, and in accordance with the Accomplishment

Instructions, paragraph 2.B.1.b.1 through 2.B.1.b.5, of Eurocopter Emergency Alert Service Bulletin (EASB) No. 05.00.81, Revision 3, dated July 13, 2012, or Eurocopter EASB No. 05A017, Revision 3, dated July 13, 2012, for your model helicopter.

(v) Before installing a MGB, modify, reidentify, and reinstall the chip collector in accordance with paragraph (f)(1)(iv) of this AD.

(2) Within 25 hours TIS, and thereafter at intervals not exceeding 25 hours TIS:

(i) For Model AS332C, L, and L1 helicopters with non-electrical chip detectors and electrical chip detectors without a caution light on the instrument panel, inspect the IGB, TGB, tapered housing, and MGB bottom casing chip detectors for a chip or metallic particle.

(ii) For Model AS332L2 helicopters with non-electrical chip detectors and electrical chip detectors without a caution light on the instrument panel, inspect the module, main rotor mast tapered housing, IGB, and TGB chip detectors for a chip or metallic particle.

(3) Within 50 hours TIS, and thereafter at intervals not exceeding 50 hours TIS:

(i) For Model AS332C, L, and L1 helicopters with electrical chip detectors with a caution light on the instrument panel, inspect the MGB bottom casing, TGB, and IGB chip detectors for a chip or metallic particle.

(ii) For Model AS332L2 helicopters with electrical chip detectors with a caution light on the instrument panel, inspect the MGB bottom casing chip detector for a chip or magnetic particle.

(iii) For Model EC225LP helicopters, inspect the MGB, IGB, and TGB chip detectors for a chip or magnetic particle. If there is a chip or magnetic particle, determine

whether the “CHIP” caution light illuminates on the “Vehicle” page of the Vehicle Management System. If the “CHIP” caution light does not illuminate on the “Vehicle” page, perform a fault analysis.

**(g) Alternative Methods of Compliance (AMOCs).**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Rao Edupuganti, Aerospace Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5110; fax: (817) 222-5961, email [rao.edupaganti@faa.gov](mailto:rao.edupaganti@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(h) Additional Information.**

(1) Eurocopter Alert Service Bulletin (ASB) No. AS332-05-00-94, Revision 0, dated July 13, 2012, and ASB No. EC225-05A29, Revision 0, dated July 13, 2012, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, Texas 75052, telephone (972) 641-0000 or (800) 232-0323, fax (972) 641-3775, or at <http://www.eurocopter.com/techpub>. You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137.

(2) The subject of this AD is addressed in European Aviation Safety Agency AD No. 2012-0129-E, dated July 13, 2012.

**(i) Subject.**

Joint Aircraft Service Component (JASC) Code: 6320: Main Rotor Gearbox and 6520: Tail Rotor Gearbox.

**(j) Material Incorporated by Reference.**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Eurocopter Emergency Alert Service Bulletin (EASB) No. 05.00.81, Revision 3, dated July 13, 2012.

Note 1 to paragraph (j)(2)(i): Eurocopter EASB No. 05.00.81, Revision 3, dated July 13, 2012, and EASB No. 05.00.58, Revision 3, dated July 13, 2012, were published together as a single document. EASB No. 05.00.58, Revision 3, dated July 13, 2012 is not incorporated by reference.

(ii) Eurocopter EASB No. 05A017, Revision 3, dated July 13, 2012.

Note 2 to paragraph (j)(2)(ii): Eurocopter EASB No. 05A017, Revision 3, dated July 13, 2012, and EASB No. 05A016, Revision 3, dated July 13, 2012, were published together as a single document. EASB No. 05A016, Revision 3, dated July 13, 2012 is not incorporated by reference.

(3) For Eurocopter service information identified in this AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, Texas 75052, telephone (972) 641-0000 or (800) 232-0323, fax (972) 641-3775, or at <http://www.eurocopter.com/techpub>.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on March 27, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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